

ABSTRACT

A bioassay substrate (1) is flat and has a disc-shaped main side like an optical disc such as CD. The substrate (1) is rotatable about a central hole (2) formed therein. The substrate (1) has formed on the surface (1a) thereof a plurality of wells (8) where a probe-use DNA (detection-use nucleotide chain) and sample-use DNA (target nucleotide chain) react with each other for hybridization. The substrate (1) has a transparent electrode layer (4) formed as an underlying layer of the well (8). For hybridization, an external electrode (18) is placed in a position near the transparent electrode layer (4) from above the top surface (1a) of the substrate (1) to apply an AC power to between the transparent electrode layer (4) and external electrode (18) in order to apply an AC electric field perpendicularly to the substrate (1).